

Claimed is:

1. An electrical component comprising:
a printed circuit board comprising an upper face and a lower face
a microprocessor mounted to said upper face;
a capacitor mounted to said lower face wherein said capacitor comprises:
a first face parallel to said printed circuit board and a second face opposite to said first face;
first plates and second plates in alternating planar relationship with a dielectric therebetween;
each first plate of said first plates comprises a first coupling tab and a power tab on opposing edges wherein said first coupling tab terminates at said first face and said power tab terminates at said second face;
each second plate of said second plates comprises a second coupling tab and a ground tab on opposing edges wherein said second coupling tab terminates at said first face and said ground tab terminates at said second face;
wherein said first coupling tab and said second coupling tab are in electrical contact with said microprocessor.
2. The electrical component of claim 1 wherein each said first plate comprises a multiplicity of power tabs and a multiplicity of first coupling tabs.
3. The electrical component of claim 2 wherein each power tab terminates at said second face.
4. The electrical component of claim 1 wherein said first plates and said second plates are substantially perpendicular to said printed circuit board.

5. The electrical component of claim 1 wherein said capacitor comprises subunits wherein each subunit comprises first coupling tabs, second coupling tabs, power tabs and ground tabs.
6. The electrical component of claim 5 further comprising first external coupling terminations in electrical contact with said first coupling tabs and second external coupling terminations in electrical contact with said second coupling tabs.
7. The electrical component of claim 6 wherein said first external coupling terminations are linearly coupled.
8. The electrical component of claim 6 wherein said first external coupling terminations and said second external coupling terminations are alternating.
9. The electrical component of claim 1 wherein said capacitor is attached to said printed circuit board by a ball grid array.
10. The electrical component of claim 1 wherein said capacitor is attached to said printed circuit board by a solder strip.
11. The electrical component of claim 1 wherein said first coupling tab and said power tab are opposing.
12. An electrical component comprising:
 - a printed circuit board comprising an upper face and a lower face
 - a microprocessor mounted to said upper face;
 - a subunit mounted to said lower face wherein said subunit comprises:
 - a first face parallel to said printed circuit board and a second face opposite to said first face;

first plates and second plates in alternating planar relationship with a dielectric

therebetween;

each first plate of said first plates comprises a first coupling tab and a power tab on

opposing edges wherein said first coupling tab terminates at said first face and

said power tab terminates at said second face;

each second plate of said second plates comprises a second coupling tab and a ground tab

on opposing edges wherein said second coupling tab terminates at said first face

and said ground tab terminates at said second face;

wherein said first coupling tab and said second coupling tab are in electrical contact with

said microprocessor.

13. The electrical component of claim 12 comprising multiple subunits.
14. The electrical component of claim 13 wherein said subunits are combined to form a capacitor.
15. The electrical component of claim 14 wherein said capacitor comprises ceramic between said subunits.
16. The electrical component of claim 14 wherein said first coupling tabs of each subunit are aligned.
17. The electrical component of claim 14 wherein said first coupling of each subunit and said second coupling of each subunit are alternating.
18. An electrical component comprising:
a printed circuit board comprising power terminals and ground terminals;
a capacitor mounted on said printed circuit board wherein said capacitor comprises:

alternating first plates and second plates with a dielectric between said first plates and second plates wherein said first plates and said second plates are perpendicular to said printed circuit board;
wherein said first plates comprise power lead out tabs terminating at power external terminals and coupling lead out tabs terminating at first coupling terminals wherein said power external terminals are in electrical contact with said power terminals; and
said second plates comprise ground tabs terminating at ground external terminals and second coupling tabs terminating at second coupling terminals wherein said ground external terminals are in electrical contact with said ground terminals;
a chipboard with said capacitor mounted thereon comprising power coupling terminals in electrical contact with said first coupling terminal and ground coupling terminals in electrical contact with said second coupling terminals.

19. The electrical component of claim 18 wherein said power lead out tabs and said ground tabs are in alternating arrangement.
20. The electrical component of claim 19 wherein said capacitor is mounted to said printed circuit board by a ball grid array.
21. The electrical component of claim 18 wherein said power lead out tabs are aligned and said ground tabs are aligned.
22. The electrical component of claim 21 wherein said capacitor is mounted to said printed circuit board by a solder strip
23. The electrical component of claim 18 further comprising a microprocessor mounted on said printed circuit board.

24. The electrical component of claim 23 wherein said printed circuit board is between said microprocessor and said capacitor.
25. The electrical component of claim 18 further comprising a heat sink.
26. A capacitor comprising:
a first face and a second face parallel to said first face and four sides perpendicular to and between said first face and said second face;
subunits wherein each subunit of said subunits comprises:
first plates and second plates in alternating planar relationship with a dielectric therebetween;
each first plate of said first plates comprises a first coupling tab and a power tab on opposing edges wherein said first coupling tab terminates at said first face and said power tab terminates at said second face;
each second plate of said second plates comprises a second coupling tab and a ground tab on opposing edges wherein said second coupling tab terminates at said first face and said ground tab terminates at said second face.
27. The capacitor of claim 26 comprising ceramic between said subunits.
28. The capacitor of claim 26 wherein said first coupling tabs of each subunit are aligned.
29. The capacitor of claim 26 wherein said first coupling of each subunit and said second coupling of each subunit are alternating.
30. A method for preparing a face termination capacitor comprising the steps of:
forming a green chip comprising ceramic precursor between parallel plates wherein each plate comprises lead out tabs and said lead out tabs of alternating plates are aligned forming first aligned tabs and second aligned tabs;

firing said green chip to convert said ceramic precursor to ceramic thereby forming a capacitor subunit;

attaching said capacitor subunit to a second subunit by adhesive wherein said adhesive is parallel to said plates;

forming a first external termination on a face of said capacitor in electrical contact with said first aligned tabs;

forming a second external termination on said face of said capacitor in electrical contact with said second aligned tabs.

31. The method for preparing a face termination capacitor of claim 30 wherein said first external termination is in electrical contact with first aligned tabs of multiple subunits and said second external termination is in electrical contact with second aligned tabs of multiple subunits.
32. The method for preparing a face termination capacitor of claim 30 wherein each subunit comprises a first external termination and a second external termination.
33. The method for preparing a face termination capacitor of claim 32 wherein each said first external termination of each said subunit is aligned.
34. The method for preparing a face termination capacitor of claim 32 wherein said first external termination and said second external termination alternate on said face.
35. The method for preparing a face termination capacitor of claim 30 wherein each said plate comprises offside lead out tabs.
36. The method for preparing a face termination capacitor of claim 35 wherein each said lead out tab and said offside lead out tabs across said capacitor are of common polarity.

37. The method for preparing a face termination capacitor of claim 35 wherein each said lead out tab is said offside lead out tabs across said capacitor are of opposite polarity.
38. A method for preparing a face termination capacitor comprising the steps of:
forming a green chip comprising ceramic precursor between parallel plates wherein each parallel plate of said parallel plates comprise lead out tabs and said lead out tabs of alternate plates are aligned to form first aligned tabs and second aligned tabs;
attaching said green chip to a second green chip with said parallel plates in each green chip parallel to form a stacked green chip;
firing said stacked green chip to convert said ceramic precursor to ceramic thereby forming a ceramic capacitor;
forming first external terminations on a face of said ceramic capacitor in electrical contact with said first aligned tabs; and
forming second external terminations on said face of said ceramic capacitor in electrical contact with said second aligned tabs.
39. The method for preparing a face termination capacitor of claim 38 wherein said first external termination is in electrical contact with first aligned tabs of multiple subunits and said second external termination is in electrical contact with second aligned tabs of multiple subunits.
40. The method for preparing a face termination capacitor of claim 38 wherein each subunit comprises a first external termination and a second external termination.
41. The method for preparing a face termination capacitor of claim 40 wherein each said first external termination of each said subunit is aligned.

42. The method for preparing a face termination capacitor of claim 40 wherein said first external termination and said second external termination alternate on said face.
43. The method for preparing a face termination capacitor of claim 38 wherein each said plate comprises offside lead out tabs.
44. The method for preparing a face termination capacitor of claim 43 wherein each said lead out tab and said offside lead out tabs across said capacitor are of common polarity.
45. The method for preparing a face termination capacitor of claim 43 wherein each said lead out tab is said offside lead out tabs across said capacitor are of opposite polarity.
46. A capacitor comprising:
a pair of opposing faces;
subunits wherein:
 each subunit comprises a multiplicity of first plates and second plates in
 alternating parallel relationship and perpendicular to said opposing faces;
 said first electrodes comprise first lead out tabs which terminate at a first external
 terminal at a first face;
 said second electrodes comprise second lead out tabs which terminate at a second
 external terminal at said first face;
 a first external terminal in contact said first lead out tabs;
 a second external terminal in contact with said second lead out tabs;
said subunits are arranged in parallel such that said first external terminals and said
second external terminals are on said first face.
47. The capacitor of claim 46 wherein said first external terminal of each said subunit are aligned.

48. The capacitor of claim 46 wherein said first external terminal is in electrical contact with a first external terminal of a second said subunit.
49. The capacitor of claim 46 wherein said first external terminal of each said subunit and said second external terminal of each said subunit are alternating.
50. The capacitor of claim 46 wherein each of said first plates comprises third lead out tabs which terminate at a third external terminal on a second face.
51. The capacitor of claim 50 wherein each of said second plates comprises fourth lead out tabs which terminate at a fourth external terminal on said second face.
52. The capacitor of claim 51 wherein said third external terminal and said fourth external terminal are aligned.
53. The capacitor of claim 52 wherein said third external terminal and said fourth external terminal are alternating.
54. The capacitor of claim 53 wherein said first external terminal and said third external terminal are opposing.
55. The capacitor of claim 54 wherein said first external terminal and said fourth external terminal are opposing.
56. A ceramic capacitor suitable for attachment to a printed circuit board comprising a multiplicity of termination contacts along a face which is parallel with said printed circuit board;

said termination points are arranged in an interdigitated fashion such that adjacent, internal electrode plates are terminated to opposite contacts and non-adjacent plates, wherein every other plate, is terminated to like termination points.